

ON  
SOME SUBSTITUTES  
FOR  
ALCOHOL  
IN THE  
TREATMENT OF FEVERS.

BY  
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IN February, 1876, a small Fever Hospital was opened at Irkennhead, and I was appointed physician to it. I had then been personally an abstainer from alcohol for about two years, and during the same period had refrained from prescribing it in the few cases, surgical and medical, in which my advice was sought, so that I felt the appointment placed me in a somewhat embarrassing position. Either I must abandon a principle that had lately striven by example and practice to sustain, or I must do violence to the memory of the teaching I had received at the schools. If it were really true that alcohol was not necessary to sick or sound, fever patients might well dispense with it; yet, on the other hand, I could not forget that in the whole range of therapeutic medicine there was scarcely a point more emphatically insisted upon than that alcohol was indispensable in the treatment of fevers. It was not only that I had been taught that alcohol was the one reliable remedy in dealing with febrile disease by my earliest instructors, but the results of nearly all my subsequent reading had confirmed me in the carefully-instilled belief—Graves, Stokes, Todd, Anstie, and so many physicians of less note, were all agreed in this respect. Nay, more, I had a terrible experience of an attack of typhus lasting many weary weeks, my recovery from which I was told, and hardly dared to doubt, was in great part due to the brandy I assimilated.

The *medicinal* applications of alcoholic beverages were by all accounts so many it seemed as if by carefully adjusting the dose one could obtain any desired result—stomachic, stimulant, sedative, narcotic. Then the variety of the beverages proffered to the physician for him to select from was even more striking. Did he desire a cordial, he was referred to brandy; a sudorific, there was rum; a diuretic, what better than gin? Dry wines and bitter beer made excellent tonics, stout and some sweet wines were gently laxative, clarets for the most part astringent and febrifuge. I say nothing of the *dietetic* properties of spirits, wines, and malt liquors. It has been recorded of them that they are even of more value as aliments than as medicines; thus to do without them would be voluntarily to surrender at once the best of remedial agents, and the most nourishing and easily-digested food.

I entered upon my duties as a fever-hospital physician with some diffidence; not, of course, with a set purpose that no alcohol should be administered, but disabusing my mind of the old notion that this or any other drug was essentially necessary. Each case should have my best attention, and when symptoms manifested themselves which I should, according to the old teaching, have regarded as demanding alcohol, I would first try if they were amenable to some other therapeutic; and, failing this, the old remedy would be available. I find that from the date of the opening of the hospital up to the end of last year (a period of less than three years) there were admitted under my personal care 243 cases, so that I am in a position to speak with some confidence of my practice. In not one of these cases have I had occasion to prescribe alcohol or alcoholic liquors, except in the form of compound tincture of bark, aromatic spirit of ammonia, chloric ether, &c., the dose, even of the bark tincture, rarely exceeding half a dram. I have not taken out my results for this paper, but I may say that on the whole I believe them to be satisfactory. Some time since I tabulated the results in about half the number of cases I am now speaking of, and compared them with a similar number of cases treated mainly with alcohol at a neighbouring hospital, in the same period of time, and the return showed my fatality to be scarcely more than half that obtaining in the companion establishment. However, I do not wish to dwell on this. Comparing the mortality of one hospital with another savours of invidiousness, and mortality statistics considered alone prove very little. My object now is not to say anything for or against the treatment of fever with alcohol, but simply to put in a few words in favour of some of the remedial agents which may, at the discretion of the physician, be made to take the place of alcohol. My allusion to the Birkenhead Fever Hospital was in justification of my claim to be heard on the subject. I wished you to understand that for three years I had been casting about for substitutes for alcohol in varying cases and circumstances. I then felt sure I should have your attention while I summed up the outcome of my experience, and named the substitutes I inclined to trust in and believed would fulfil the indications required.

Let us take an ordinary case of typhus. It will not unfrequently happen that towards the end of the first week, or perhaps later (pyrexia not being excessive), the small, rapid, compressible pulse, and feeble heart-beat, warn the practitioner that the fever is assuming an adynamic type, and that what is commonly called a stimulant is required. Or it may chance that in the first week or later there is delirium, not accompanied with much restlessness, but persistent and marked by defective utterance. This, too, is asthenic, indicative of a starved brain, due to depressed

erebral circulation. Again, there are cases of typhus in which the patient before the close of the first week manifests symptoms almost exactly opposite to these. The temperature is probably higher, or, at all events, reaches a higher maximum; the pulse and heart-beat are irregular and intermittent, and the patient is restless and struggling, and has delusions, but articulates well and has distinct lucid intervals. Yet, again, there are cases where the condition usually regarded as calling for alcohol is a fall in the pulse-beat without a corresponding fall in temperature. The pulse is soft as well as slow, and the heart-sounds somewhat muffled. These four conditions, differing outwardly, are alike in this that they are all due to impaired circulation, and would all, I believe, be accounted by most practitioners as warranting, if not demanding, a resort to some form of alcoholic liquor. The question is—Will anything else increase the force of the heart and improve the capillary circulation? There need be no hesitation about answering in the affirmative. I am in the habit of using three drugs for this purpose—ammonia, cinchona, and camphor. They certainly do the work required of them, and are, I submit, less likely than alcohol to be followed by undesirable reaction, to interfere with secretions, and derange digestion. Carbonate of ammonia has a bad reputation for disturbing the stomach and bowels, but I have not found it do so. However, should it be found to have this effect, the aromatic spirit of ammonia can be given instead. Cinchona is said to constipate, and it certainly does in some cases, but the defect is easily corrected by adding a little infusion of senna, itself a gentle stimulant. I nearly always prescribe the decoction of cinchona, the tincture of the same, and ammonia in a mixture, and this is felt by patients to be such an excellent substitute for wine that, occasionally (I suppose only when the taste is much impaired), they mistake it for wine, speak of it as wine, and ask for it. I may remark, also, that there is a manifest advantage which ammonia and bark have over alcohol—they never encourage coma. I remember that Sir Thomas Watson says of opiates invers that “they are apt to puzzle and perplex the case. You do not know how much of the disposition to coma is owing to disease, and how much is the consequence of the remedy.” Again, he adds, “You may easily augment the natural tendency to coma, and lull your patient into a fatal stupor.” These observations, it appears to me, are as applicable to alcohol as to opiates. As regards camphor, it may be trusted to increase the force of the circulation, and is a good stimulant; but it is I think less adapted for the states I have been speaking of than for those now to be referred to.

There are cases where the circulation is less affected than the nervous system; or rather, there are periods in certain cases when

such is the condition. Possibly this is not literally true. The circulatory and nervous systems are so intimately connected, and in fever both are so obviously disturbed, it becomes impossible to refer a particular set of symptoms to either exclusively or primarily. However, I speak conventionally. On the appearance of these symptoms, I think it would be generally held that alcohol was indicated, the influence it exerts on the nervous system being undoubtedly. The pulse is rapid but firm, the skin is dry, the mouth is parched, the head is very hot, there is vertigo, and sometimes noisy delirium; the feet are often cold. If the patient be not gently and successfully guided through this stage of his malady, by nature or art, it soon merges into another, the more marked symptoms of which are subsultus and tremor, and sometimes hiccough. Now how are we to manage a case at a time when the head symptoms constitute the main feature? Having applied ice, or an evaporating lotion, to the head, if necessary, warmth to the feet, and arranged that the patient is sponged all over at least once a day, what else can we do? Small doses of alcohol given from time to time when the patient is quiet, and which are not large enough to depress unduly, often seem to affect the patient favourably. Will anything else act as a sedative to the nervous system as well or better? My answer is that small doses of camphor will. Under its influence the excitement is allayed, the headache abates, and sleep is more likely to be induced than by alcohol. Is it necessary to give anything else; for instance, to induce the skin to perform its functions? I think not, camphor being an excellent diaphoretic. In such a case I might prescribe also a little *liquor ammoniæ acetatis*, and a small dose of Dover's Powder nightly. But this is a small matter. I should not regard either the acetate of ammonia or the powder as a substitute for alcohol, but the camphor only.

And if alcohol, or whatever has been given instead, has failed to control the so-called typhoid symptoms, or if no attempt has been made to control them, and the patient as presented to the practitioner for treatment is in that last stage which so often heralds death, is alcohol the only remedy then on which any sort of hope can be built? When the surface temperature has fallen, when carphology has given place to a mere trembling of the fingers, when the watching has been succeeded by stupor, when the anxious expression is fading from the face, and the dusky hue is deepening, when there is paralysis of the sphincter and incontinence of urine, is there yet an alternative? There is. The desideratum at such a time is something the effect of which will be at once appreciable, and for this reason I prefer the *Spiritus Aetheris Comp.* combined with the aromatic spirit of ammonia, and given in small doses frequently repeated. The required effect is more rapidly produced than with alcohol. The

patient will soon be roused enough to take strong coffee or tea, and the danger from coma will be over for the present.

A word now on patients of intemperate habits. Authorities on the subject are for the most part agreed that alcohol is particularly called for in typhus occurring in persons addicted inordinately to the use of spirituous liquor. However, a similar opinion is obtained as to the dosing of delirium tremens patients with alcohol, but it is not the method of treatment now most in favour. doubt if alcohol is beneficial in either instance. The special characters of typhus in a person of intemperate habits are probably the early appearance of the head-symptoms and their persistence, and tremor, great thirst and insomnia. For the abatement of these I incline to trust to camphor and ammonia, drink made of meal and camphor-water, and either chlorodyne or hydrate of chloral at night.

There are several distressing symptoms likely to arise in the course of fever, for the relief of which alcoholic liquors are commonly prescribed. Let me now briefly consider some of them. The more significant are rigors, syncope, hard dry tongue, gastrodynia, and profuse perspirations. As soon as a fit

rigors commences, or is merely threatening, the familiar remedy is brandy- or rum-punch. I do not doubt its efficiency, if any hot drink, as hot as the patient can swallow it, is also efficient. A few tea-spoonfuls of the pharmacopœial syrup of ginger, or, better still, a few slices of the preserved green rhizome, stirred in a tumbler of hot water, makes an excellent punch for this purpose. In fainting, I should rely mainly on external stimulants, and if I gave anything by the mouth it would be offman's ether and ammonia, rather than brandy. I have understood why alcohol should be recommended when the tongue is exceptionally hard and dry. I am convinced that apples or some other ripe fruit, will be found the best remedy in such cases. The glucose therein contained is good food, and will be digested when, through the deficiency of saliva, scarcely any other food would be. Again, fruit will be more acceptable to the patient than the finest wine. As gastrodynia is nearly always due to dyspepsia, it should be regarded rather as an indication that the patient's diet-slip requires revision, than as calling for a specific remedy. Profuse perspiration, not coming on at a single, but earlier, and continuing without improvement in the general symptoms, is a most troublesome complication, and always indicative of great weakness. It is more likely to yield quinine than to alcohol. I should sponge the body with dilute alcohol, and give sulphate of quinine in 2-gr. doses, with or without iron. Unless these debilitating perspirations are treated properly and wisely the patient may sink altogether, or pass into a condition I can only describe as idiopathic hectic.

There is a condition occasionally met with in fever, in which gin is at once suggested to the practitioner. The kidneys are not acting freely, and there is fear of the blood becoming loaded with effete matter, and the typhoid state being induced. What substitute have we for gin in such a case? First, there are the pharmacopœial preparations of juniper; and secondly, there is belladonna, which will not only promote elimination from the kidneys, but strengthen the circulation, and allay nervous excitement.

I have been speaking hitherto of typhus, because this has been generally recognised as the type of all fevers proper to this climate; but I do not mean that what I have said should apply exclusively to typhus. This of all fevers is liable to take the asthenic form; this of all liable to become ataxic. My argument is thus from the greater to the less. If in typhus, a disease mainly of adults of the destitute and ill-fed, it is practicable to do without alcohol, surely there can be no necessity for it in enteric fever, a disease chiefly met with in youth and adolescence, and in the well-to-do classes, or in scarlet fever, a disease of children in whom the circulation is strong and the pulse firm.

Now, as regards convalescence. It is usual to prescribe wine and malt liquors for convalescents. I would submit that plenty of fresh, sweet fruit, is preferable to wine; and I suppose it will now be generally allowed that properly prepared malt extract feeds the patient, and assists digestion, better than beer or porter. The lighter preparations of animal food, such as plain chicken soup, Gillon's essence of beef, calves' feet jelly, and fresh serum of blood, may not only be made to take the place of alcoholic liquor during the fever and during convalescence, but they will go far towards removing the craving for it. Nearly all patients, too, know how to appreciate that pleasant combination of animal and vegetable food, a well-made *purée*.

Finally, I think that in treating fever cases some of us do not sufficiently consider what a very useful therapeutic agent is cold water. Ministering relatives and nurses will speak of it as "raw water, and are always adulterating it in various ways for the purpose of "taking the rawness off," whatever that may mean. It can scarcely be called a substitute for alcohol, but it does much that alcoholic liquors are expected to do; it is a diuretic, a diaphoretic, a febrifuge, and a great many other things besides. There are few fever patients who do not long for it and pray for it. Why should we refuse it?

" 'Tis a little thing

To give a cup of water; yet its draught  
Of cool refreshment, drain'd by fever'd lips,  
May give a shock of pleasure to the frame  
More exquisite than when nectarean juice  
Renews the life of joy in happiest hours."